



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,574	09/11/2006	Wojciech Piasecki	PL-CRC/03/05	3321

7590 11/01/2007
Michael M Rickin
Abb Inc
Legal Department 4U6
29801 Euclid Avenue
Wickliffe, OH 44092-1832

EXAMINER

WILLOUGHBY, TERRENCE RONIQUE

ART UNIT	PAPER NUMBER
----------	--------------

2836

MAIL DATE	DELIVERY MODE
-----------	---------------

11/01/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/564,574	Applicant(s) PIASECKI ET AL.	
	Examiner Terrence R. Willoughby	Art Unit 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

Claim Objections

Claim 1 recites the limitation "the open delta system" in line 2 of the claim.

There is insufficient antecedent basis for this limitation in the claim.

DETAILED ACTION

Specification

Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

Claim Objections

Claim 1 recites the limitation "the open delta system" in line 2 of the claim.

There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peiser et al. (DE 1265836) in view of Berndt (US 6,567, 249).

Regarding claim 1, Peiser et al. in (Fig. 1) discloses a protecting system for medium-voltage potential transformers, comprising an attenuating resistor (R) connected into the open-delta system of three auxiliary second windings (w_{r3} , w_{s3} , w_{t3}) of three single-phase transformers (W_r , W_s , W_t), which is deactivated by a switching device (r_r , r_s , r_t) connected in series between the output (U) of the auxiliary secondary winding of one of the single-phase transformers (W_r , W_s , W_t) and the attenuating resistor (R).

Peiser et al. does not disclose that the switching device has a form of a thermal fuse and is connected in series with an element with a threshold voltage and current characteristic.

However, Berndt in (Fig. 4) discloses a thermal fuse (S1) and is connected in series with an element with a threshold and current characteristic (D2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the thermal fuse and element with a threshold and current characteristic as taught by Berndt to the output of the auxiliary secondary winding of one of single-phase transformers and the attenuating resistor as taught by Peiser et al. to protect the transformer winding insulation from destroying due to overheating.

Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peiser et al. (DE 1265836) in view of Berndt (US 6,567, 249) as applied to claim 1 above, and further in view of Streater (US 3,467,903).

Regarding claim 2, Peiser et al. in view of Berndt discloses the system of claim 1, except for the thermal fuse in the form of a bimetallic circuit breaker, and the element with a threshold voltage and characteristic has the form of two zener diodes push-pull connected with one another.

However, Streater in (Fig. 9) discloses a thermal fuse in the form of a bimetallic circuit breaker (69), and a element with a threshold voltage and characteristic having the form of two zener diodes (72,73) configured in a push-pull connection with one another.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the bimetallic circuit breaker and the two zener diodes configured in a push-pull configuration as taught by Streater in the protective system device of Peiser et al. mentioned combination to provide a much simpler and reliable thermal protective circuit.

Regarding claim 3, Peiser et al. in view of Berndt and in view of Streater discloses the system of claim 1, characterized in that the thermal fuse (Streater, Fig. 10, 79) has the form of a PTC resistor (Streater, Fig. 10, 81), and the element with a threshold voltage and current characteristic has the form of two zener-diodes (Streater, Fig. 9, 72, 73) in a push-pull connection with one another.

Regarding claim 4, Peiser et al. in view of Berndt and in view of Streater discloses the system of claim 1, characterized in that the thermal fuse is a PTC resistor

(Streater, Fig. 10, 81), and the element with a threshold voltage and current characteristic is a varistor (Streater, , Fig. 9, 71).

Regarding claim 5, Peiser et al. in view of Berndt and in view of Streater discloses the system of claim 1, characterized in that the thermal fuse is a thermal fuse in the form of a bimetallic circuit breaker (Streater, Fig. 9, 69), and the element with a threshold voltage and current characteristic is a varistor (Streater, , Fig. 9, 71).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Rosa et al. (US 3,401,272) discloses a protective system for ferroresonant transient suppression. Sweetana, Jr. et al. (US T967, 008) disclose a capacitive voltage transformer with a ferroresonance protection device. Fujiki et al. (US 5,012,182) discloses in (Fig. 18) a resistor connected into an open delta system of three auxiliary secondary windings of a three-single phase transformer system.

Application/Control Number:
10/564,574
Art Unit: 2836

Page 6

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terrence R. Willoughby whose telephone number is 571-272-2725. The examiner can normally be reached on 8-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on 571-272-2084. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TRW
11/29/07



MICHAEL SHERRY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800